

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**EMERGENCY OCCURRENCE REPORT**

Source Name: U.S. Steel - Gary Works  
Source Address: One North Broadway, Gary, IN 46402  
Mailing Address: One North Broadway, Gary, IN 46402  
Part 70 Permit No.: T089-7663-00121

This form consists of 2 pages

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This is an emergency as defined in 326 IAC 2-7-1(12)

The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and  
The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

**No. 5 and 7 Coke Batteries; CP5B0090 AND CP7B0094**

Control Equipment:

**Pushing emission control baghouse CP3041**

Permit Condition or Operation Limitation in Permit:

**D.2.18(2) The baghouse CP3041 shall be in operation at all times, when the No. 5 and/or 7 Coke Batteries pushing processes are in operation, to control particulate matter.**

Description of the Emergency:

**Heavy thunderstorms in Lake County resulted in a lightning strike that damaged the Induced Draft Fan Motor for the baghouse.**

Describe the cause of the Emergency:

**Heavy thunderstorms in Lake County resulted in a lightning strike that damaged the Induced Draft Fan motor for the baghouse.**

If any of the following are not applicable, mark N/A

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Date/Time Emergency started: 6/23/2010 at 18:55
Date/Time Emergency was corrected: 6/24/2010 at 14:30
Was the facility being properly operated at the time of the emergency? <u>Y</u> <del>N</del>
Describe: <b>Fan failure was sudden and catastrophic</b>
Type of Pollutants Emitted: <b>TSP, PM-10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, CO, Pb, other:</b>
Estimated amount of pollutant(s) emitted during emergency: <b>Unknown</b>
Describe the steps taken to mitigate the problem: <b>Replaced motor as quickly as practicable.</b>
Describe the corrective actions/response steps taken: <ul style="list-style-type: none"><li>• Operations were curtailed on 5 and 7 Battery for 5.5 hours.</li><li>• Fan motor replacement began immediately and continuously pursued until final repair was made.</li></ul>
Describe the measures taken to minimize emissions: <ul style="list-style-type: none"><li>• An interim procedure was implemented which included increasing the coking time on 5 and 7 Batteries a minimum of 4 hours and allowing for pushing only 2 ovens maximum per hour on each Battery</li><li>• 5 and 7 Battery management inspected all ovens prior to the push during the emergency</li><li>• All daylight pushes were read for opacity. 6% was the highest opacity observed</li></ul>
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: <ul style="list-style-type: none"><li>• To maintain safe back pressure control which will prevent an explosive condition from occurring due to air infiltration on 5 and 7 Battery gas collector mains. As ovens coke out there is less gas generation without charging coal into ovens.</li><li>• Battery integrity. During the coking cycle coke mass temperatures increase until the oven is pushed. If the coke mass gets too hot it will cause the coke to adhere to the walls which results in a sticker. During planned outages the battery heating is adjusted prior to the outage to control the coke mass temperatures during the outage. This was an unexpected delay. The aim coking time for 5 Battery is 28 hours and 7 Battery is 23 hours.</li><li>• This emergency happened during severe weather conditions and the heavy rains were expected to continue which would further cool the collector mains. The cooling of the collector mains and the lack of fresh gas from charging ovens can cause uncontrollable back pressure which will cause plant suction problems affecting other operating units. This can also create a very unsafe condition for our personnel, including the threat of an explosion.</li></ul>

Form Completed by: Jim Alexander/Air Compliance Manager

Title / Position: Jim Alexander/Air Compliance Manager

Date: June 25, 2010

Phone: 219-888-3387

A certification is not required for this report.



JUN. 24. 2010 3:01PM

OCS TRAILER

NO. 665 P. 1

## Pushing Observations



Date

6-24-10

Battery No.

2

5

7

Start Time

11:32

Observer

D. [Signature]

Finish Time

13:46

Oven No.	Door Removal hh:mm:ss	Push Time		Travel Time		Door Replaced mm:ss	Duration mm:ss	Push Opacity				Travel Opacity			
		Start hh:mm:ss	End mm:ss	Start mm:ss	End mm:ss			0	15	30	45	0	15	30	45
20	11:32 08	11:39 33	1:37	1:37		6:49	2:51	0	15	5	0	0	0	0	0
								0	0	0		0			
			+97		+74	+409	121					Mact Avg.		1.67	%
												IDEM Avg.		3.33	%
25	11:53 31	12:03 30	58	58		5:08	2:17	0	20	5	0	0	0	0	0
			+58		+79	+308	137					Mact Avg.		2.50	%
												IDEM Avg.		4.17	%
30	12:18 23	12:32 31	48	48		6:34	2:04	0	15	5	0	0	0	0	0
			+48		+76	+384	124					Mact Avg.		2.22	%
												IDEM Avg.		3.33	%
35	12:46 07	13:10 24	49	49		6:11	2:03	0	20	10	5	0	0	0	0
			+49		+74	+321	123					Mact Avg.		3.89	%
												IDEM Avg.		5.83	%
40	13:24 12	13:40 10	44	44		6:07	1:51	0	25	5		0	0	0	0
			+44		+67	+367	111					Mact Avg.		3.25	%
												IDEM Avg.		5.0	%
	14:41 02											Mact Avg.			%
												IDEM Avg.			%

Oven No. Of Door Removed Exceeding 20% Opacity Before Push

Passed (Extended) Oven Nos.:

Passed (Out of Service) Oven Nos.:

Passed (Green) Oven Nos.:

Other Comments: OUT OF SUN COMPLIANCE FOR 20, 25, 30, 35, 40

Temperature

71

Wind Speed

11

Wind Direction

W

Humidity

87%

Gas Cleaner

9121

9122

9119

Baghouse

Door Machine: East

West

## Pushing Observations



Date

6-24-10

Battery No.

2 5 ⑦

Start Time

075800

Observer

MILSAP/WALSH

Finish Time

14:40

Oven No.	Door Removal hh:mm:ss	Push Time		Travel Time		Door Replaced mm:ss	Duration Time mm:ss	Push Opacity				Travel Opacity			
		Start hh:mm:ss	End mm:ss	Start mm:ss	End mm:ss			0	15	30	45	0	15	30	45
13	00	10	1:30	22:00	2:20	1320	140	0	10	0	0	0	0	0	0
								0	0	0	0				
21	11:43 12	11:45 54	1:13	1:13	9:26	2:15	135	0	10	0	0	0	0	0	0
								0				0			
26	11:59 10	12:23 22	1:02	1:02	6:28	1:47	107	0	20	10	5	0	0	0	0
								0							
31	12:37 10	13:01 56	59	59	6:07	1:46	106	0	15	10	5	0	0	0	0
36	13:10 08	13:19 43	58	58	6:03	1:41	101	0	25	5	0	0	0	0	0
41	14:32 35	14:35 55	58	58	5:01	2:11	131	0	25	5	5	0	0	0	0
								0				0			

Oven No. Of Door Removed Exceeding 20% Opacity Before Push

Passed (Extended) Oven Nos.:

Passed (Out of Service) Oven Nos.:

Passed (Green) Oven Nos.:

Other Comments: OUT OF SUN COMPLIANCE FOR 21, 26, 31, 36, 41

Temperature

67

Wind Speed

11

Wind Direction

W

Humidity

87%

Gas Cleaner

9121

9122

9119

Baghouse

Door Machine: East

West

SD

**Number of Heats Pushed  
without Controls  
6/24/2010**

Shift	CB5	CB7
Midnight	10	10
Day	5	5
Afternoon		1
	15	16
Total	31	